

MDOT Responses to Questions from House Transportation Committee Members
February 3, 2015

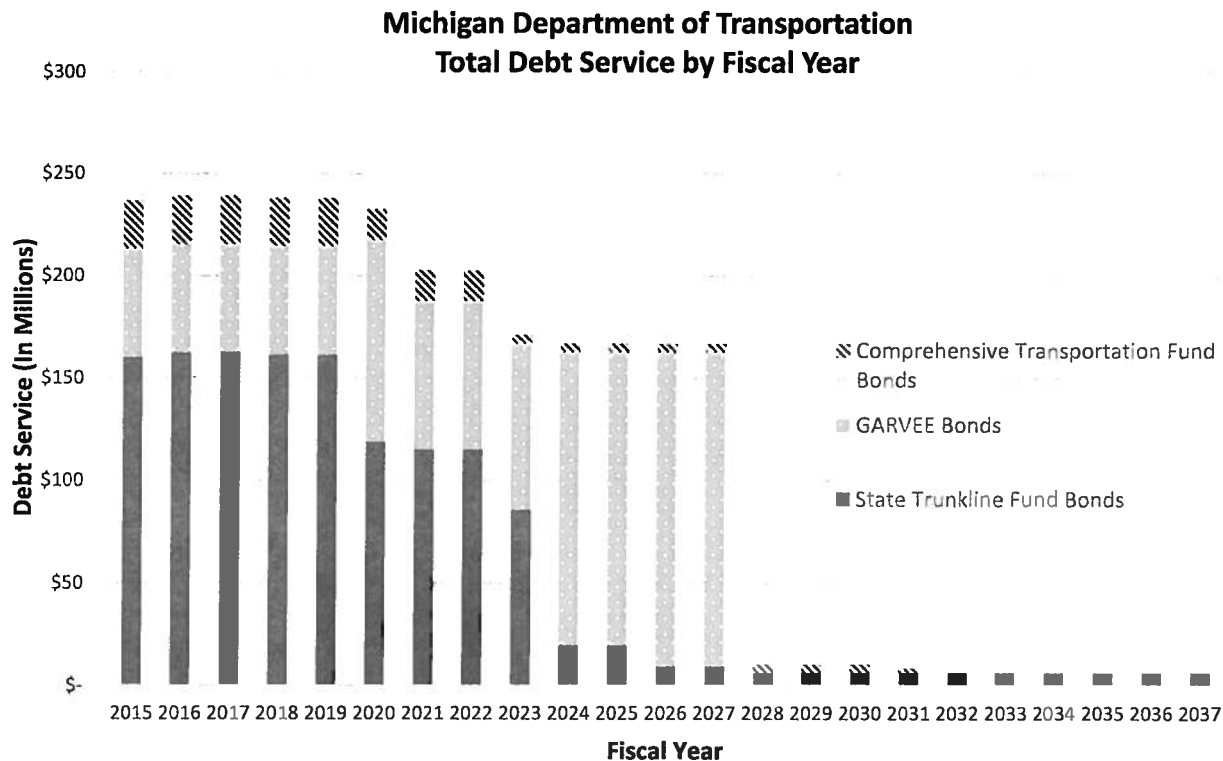
Bond Debt

Article 5 Section 28 of the Michigan Constitution establishes the State Transportation Commission. Article 9 Section 9 of the Michigan Constitution authorizes the issuance of debt obligations based on restricted transportation revenues. MDOT debt is not considered a general obligation of the state. Act 51 PA 1951 authorizes the State Transportation Commission to issue debt obligations.

According to Edward A. Timpf, CPA, Administrator, Financial Operations Division, Michigan Department of Transportation:

"In FY 15 we have appropriated \$242 million of debt service – however, \$7m will be offset with IRS Rebate so really \$235m in Debt Service Payments. This is all bonds, all funding sources – STF, Federal, BWB, CTF, Aero and local bridge. We also did some refunding to save interest last year after the appropriation bill was passed, so our actual Debt Service payments will actually be around \$225 million."

MDOT currently has a total of \$1.96 billion of principal outstanding on bonds. The last of the existing bonds will be paid off in 2037, but that most of the debt will be paid by 2027.



MDOT Employees

At the end of FY 2014, MDOT's actual count of permanent employees was 2434.

In addition, please see the memorandum prepared in May, 2014, by William E. Hamilton, House Fiscal Agency, regarding Michigan Department of Transportation Staffing Levels.

http://house.michigan.gov/hfa/PDF/Transportation/MDOT_Staffing_Memo_May16.pdf

Federal Funding

What programs are tied to federal funding dollars?

Currently, all MDOT programs are tied to federal funds. Many years ago, MDOT did have a state-funded "M" program, for projects that might be more effectively undertaken without federal funds attached, but it has been at least a decade since MDOT was able to undertake any projects without using federal aid.

What is our federal matching requirement?

The maximum share of project costs that may be funded with federal aid highway funds varies based on the program and project. Interstate projects are typically funded at 90% federal share, while projects on other federal-aid eligible routes are funded with 80% federal share. Some specific types of projects, such as safety projects, can be funded with a federal share of 100%, although there are limits to how many such projects that can be undertaken in a given year. The following link spells out the details of federal matching requirements:

<http://www.fhwa.dot.gov/map21/factsheets/fedshare.cfm>

What is the breakdown of the federal funding we receive?

In 2014, Michigan received \$1.016 billion dollars of Federal Highway Authority (FHWA) apportionment for highways. In keeping with the 75/25 provision of Act 51, MDOT received \$762.2 million.

In addition, MDOT received \$44.7 million in funds for transit from the Federal Transit Administration, \$10.1 million for passenger rail from the Federal Rail Administration, and \$78.6 million for aviation from the Federal Aviation Administration. Local transit agencies and local airport authorities may also have received federal revenue that did not pass through MDOT.

How much does Michigan have to invest in transportation funding to draw down federal funding?

FHWA funds are reimbursement funds. MDOT's non-federal share is calculated on a project by project basis. The non-federal share is typically anywhere from 0% to 20% depending on

fund source and/or project type. When you look at the program as a whole the non-federal share is typically in the 15% range. At the 2014 level of \$762 million in federal highway funds, MDOT would anticipate the need for approximately \$134.5 of state funds for a total federal aid program of \$896.7

Is Michigan a donor state for road funding?

Recent develops in federal highway funding have complicated the discussion of Michigan's donor state status. Further complicating the conversation is the fact that the Federal Highway Trust Fund is projected to be without sufficient funds to fully meet its obligations in May 2015, unless Congress acts before then to increase revenue to the fund.

For most of the past twelve years, federal transportation taxes have not produced enough revenue to support the level of highway funding enacted by Congress. To make up the difference and ensure that highway funding would not face drastic reductions, Congress has opted to supplement federal transportation tax revenue by transferring general tax revenue into the Highway Trust Fund (HTF). The table to the right shows the amount and year of each transfer. While much of this general tax revenue is also paid by taxpayers in Michigan, it is not known how much of it comes from Michigan. Since attribution to specific states of this General Fund revenue is not available, these funds are typically omitted from analyses that attempt to examine the donor state issue.

Fiscal Year	Amount Transferred into the HTF
2008	\$8 billion
2009	\$7 billion
2010	\$19.5 billion
2012	\$21.2 billion
2014	\$10.7 billion
Total	\$66.5 billion

Typically, when evaluating donor status, the focus of the analysis is to compare the relative share of a state's contribution to the HTF to the relative share of that state's return. This analysis is no longer so straightforward because of the addition of General Funds to the HTF. A definitive answer to the question of whether Michigan is a donor state requires that we know how much of the federal General Fund revenue transferred into the HTF has come (or will come) from taxpayers in Michigan. Without this information, it is impossible to determine with any certainty whether we are a donor state, and if so, to what degree.

A "dollars-in-dollars-out" comparison is easier to accomplish, but no more definitive. The table below shows Michigan's highway funding and Michigan's contributions to the Highway Account of the federal Highway Trust Fund for the past several years. According to the figures reported in this table, Michigan was a donor state in 2012, but not in 2011 or 2013.

Fiscal Year	Federal Highway Funding to Michigan	Federal Transportation Tax Revenue from Michigan Taxpayers	Was Michigan a Donor State?
2011	\$1,035.9 million	\$937.6 million	No
2012	\$988.6 million	\$1,012.6 million	Yes
2013	\$1,008.0 million	\$920.9 million	No

For additional information, please see the Memorandum prepared in March, 2012, by William E. Hamilton, House Fiscal Agency, regarding Michigan's Return on Contributions to the Federal Highway Trust Fund:

<http://www.house.mi.gov/hfa/PDF/Transportation/DonorStateIssue.pdf>

Transparency

All MDOT expenditures are posted online as part of the State of Michigan's Transparency and Accountability website:

<http://media.state.mi.us/mitransparency>

Interdepartmental Grants

Fees paid by road users are transferred to various departments of state government from the Michigan Transportation Fund, or through other Funds. Transfers from the Michigan Transportation Fund (MTF) are called interdepartmental grants, or IDGs.

Four IDGs come from the MTF itself. These pay for services by other state agencies on behalf of all state and local transportation programs:

- \$1,312,800 to the Department of Environmental Quality, for permit issuance to MDOT and local road agencies. This pays for positions at DEQ to assure speedy handling of permits having to do with wetlands and discharges to surface water.
- \$20,000,000 to the Secretary of State for part of the cost of collection of road-user fees through its license-plate operation. This is the largest IDG. (Approximately \$41,100,000 per year is appropriated to the Secretary of State from a \$5.75/year tax on about 7,155,000 vehicle registrations, without flowing through the MTF. This is not called an IDG, but comes from the same source and is appropriated for the same purpose as the \$20,000,000 IDG.)
- \$2,700,000 to the Department of Treasury, for administering the Motor Fuel Tax Act.
- \$303,500 to the Legislative Auditor General, for audits.

Sixteen other IDGs are made from the State Trunkline Fund (STF), the State Aeronautics Fund (SAF) or the Comprehensive Transportation fund (CTF). These pay for functions of state government performed on behalf of individual programs. These include:

- Technology, Management and Budget, for data processing and administrative functions
- Michigan State Police, for administration of traffic-crash records and construction-zone enforcement. This is the largest class of program-related services, at \$11,258,700. (Approximately \$16,100,000 per year is appropriated to the State Police from a \$2.25/year tax on 7,155,000 vehicle registrations, but is not called an IDG.)
- State Civil Service Commission, for employment administration
- Attorney General, for legal services
- Treasury, for handling of revenues
- Legislative Auditor General, for audits.

The total of interdepartmental transfers from the MTF and its constituent funds is \$46,932,800 in Fiscal 2015.

The total of vehicle-registration fees appropriated to other agencies through the Transportation Administration Collection Fund (TACF) and the Traffic Law Enforcement and Safety Fund (TLE&SF) is approximately \$57,200,000 per year. This money comes from the same restricted source and goes to the same agencies as grants from the MTF.

Attached: excerpt from Fiscal-2015 Transportation budget.

Excerpt from P.A.252 of 2014 (HB 5313), Fiscal-2015 Transportation Budget:

Sec. 103. COLLECTION, ENFORCEMENT, AND OTHER AGENCY SUPPORT SERVICES

MTF grant to department of environmental quality.....	\$ 1,312,800
MTF grant to department of state for collection of revenue and fees.....	20,000,000
MTF grant to department of treasury.....	2,700,000
MTF grant to legislative auditor general.....	303,500
STF grant to department of attorney general.....	2,387,000
STF grant to civil service commission.....	5,697,000
STF grant to department of technology, management, and budget.....	1,296,300
STF grant to department of state police.....	11,433,400
STF grant to department of treasury.....	129,900
STF grant to legislative auditor general.....	704,900
SAF grant to department of attorney general.....	174,400
SAF grant to civil service commission.....	150,000
SAF grant to department of technology, management, and budget.....	38,600
SAF grant to department of treasury.....	74,300
SAF grant to legislative auditor general.....	29,100
CTF grant to department of attorney general.....	200,900
CTF grant to civil service commission.....	200,000
CTF grant to department of technology, management, and budget.....	47,000
CTF grant to department of treasury.....	16,400
CTF grant to legislative auditor general.....	37,300
GROSS APPROPRIATION.....	\$ 46,932,800
Appropriated from:	
Special revenue funds:	
Comprehensive transportation fund.....	501,600
Michigan transportation fund.....	24,316,300
State aeronautics fund.....	466,400
State trunkline fund.....	21,648,500
State general fund/general purpose.....	\$ 0

MDOT Facilities

How many MDOT Buildings are owned/leased?

MDOT has over 400 buildings consisting predominantly of Lansing, Region, and TSC offices; Garage/Maintenance Crew facilities; Welcome Center/Rest Area facilities; Bus/Rail Terminal Facilities; Salt/Sand Storage facilities; Cold Storage Buildings; Heated Storage Buildings; labs; sign/signal shops; training facilities; and lean-to facilities. There are 156 primary or stand-alone facilities that typically encompass the other buildings. Of those 156 buildings, 145 are owned and 11 are leased. Below is the breakdown:

- Lansing Office Buildings: total of 7 (4 owned; 3 leased)
- Region Office Buildings: total of 7 (7 owned)
- TSC Office Buildings: total of 22 (17 owned; 5 leased)
- Garage/Maintenance Crews Buildings: total of 35 (35 owned)
- Welcome Center Buildings: total of 14 (12 owned; 2 leased)
- Rest Area Buildings: total of 65 (65 owned)
- Rail/Bus Terminals: total of 6 (5 owned; 1 leased)

What are the expenses for MDOT buildings?

The cost of operation for all MDOT buildings will take time to compile, but the cost of operations for the 22 TSCs is readily available.

For FY 2013, the total TSC administrative and operational costs = \$3,272,450

For FY 2013, the total average administrative and operational costs per TSC = \$148,750

For FY 2011 to FY 2013, the average total TSC administrative and operational costs = \$3,278,390

For FY 2011 to FY 2013, the total average administrative and operational costs per TSC = \$149,020

The following information represents what is included in the calculation of administrative and operational costs:

Operating costs:

- Building Maintenance (maintenance/repair)
- Facilities Services/Supply (janitorial, rubbish removal, lawn care, snow/ice removal, etc.)
- Utilities (gas, electric, propane, and water and/or sewer service)
- Annual Lease Rate
- Owned Depreciation

Administrative Costs:

- Communications (telephone service, cell phone service, DTMB-IT Communications, pager service, answering service, teleconference, etc.)
- Office Supplies and Equipment (General Office supplies; mail service; copy service; equipment such as printers, fax machine, plotters, etc.)

The following provides an overview as to when the TSCs were created, why they were created, their purpose and function, as well as the responsibilities of those employees who reside in TSCs.

Prior to 1997, the department was organized into nine districts with executive and bureau/division offices in Lansing. Under this previous organizational structure, there were more than 50 project/construction offices throughout the state located within the nine districts. In 1997, in an effort to better serve the public, build stronger relationships with the public and local agencies, and adapt to increased and transitioning responsibilities, MDOT changed the way it did business. A substantial reorganization occurred resulting in a change from nine districts and over 50 project offices to seven geographic regions and 26 TSCs. While there were some functions that shifted from being performed centrally to being performed in the regions, the result of the reorganization was not decentralization; rather, it was an increased emphasis on customer focus and streamlining operations and facilities in adapting to and performing progressive department responsibilities and functions. In 2011, with a continued focus on streamlining operations and an emphasis on core functions, MDOT underwent a reorganization, which resulted in further facility closings and consolidations. As a result, there are currently 22 TSCs within the department's seven regions.

Careful consideration was given to the placement of the TSCs during the development of MDOT's reorganization plan. TSCs are strategically placed within each region to ensure they are within reasonable proximity to Michigan citizens. This is important in reaching out to the public and making the best use of MDOT's resources and investments in serving the state of Michigan. MDOT TSC offices do much more than house MDOT employees. Federal requirements dictate that MDOT employees are in the field and around the state to perform inspection and oversight functions. These employees also perform and handle the planning, development, and design of transportation projects; construction administration, first responder duties, traffic operations; trunkline maintenance, and the issuance of permits. They provide technical expertise, program guidance, and are the first line staff with citizens and the traveling public in developing and delivering transportation projects and programs through the State of Michigan. Being housed at TSCs is a necessity in being able to perform the required functions and work activities, and is far more cost effective than having to expend much more in employee travel costs and expenditures.

MDOT Air Fleet

In FY2014 the estimated cost to operate MDOT's five aircraft was \$1,340,104. Total billings for use of the fleet, including Office of Aeronautics use, was \$721,654. Specific information on aircraft utilization is included below.

Office of Aeronautics Air Transport Unit FY2014 Aircraft Utilization Summary

King Air N1655M:

1999 Raytheon/Beechcraft Model B-200 powered by 2ea Pratt & Whitney 850 SHP turbine engines. A pressurized cabin with 7-9 passenger seating configuration and cruise speed of 320 MPH. Aircraft based in Lansing.

2014 Q1 utilization	40.1 flight hours	29 trips	74 legs	130 passengers
2014 Q2 utilization	61.2 flight hours	58 trips	149 legs	139 passengers
2014 Q3 utilization	67.3 flight hours	54 trips	141 legs	257 passengers
2014 Q4 utilization	92.7 flight hours	57 trips	128 legs	324 passengers

King Air N702MA:

1982 Beechcraft Model B-200 powered by 2ea Pratt & Whitney 850 SHP turbine engines. A pressurized cabin with 7-9 passenger seating configuration and cruise speed of 320 MPH. Aircraft based in Lansing.

2014 Q1 utilization	57.9 flight hours	50 trips	121 legs	224 passengers
2014 Q2 utilization	38.4 flight hours	36 trips	94 legs	149 passengers
2014 Q3 utilization	79.8 flight hours	75 trips	197 legs	355 passengers
2014 Q4 utilization	50.4 flight hours	53 trips	137 legs	228 passengers

Baron N2844D:

1994 Beechcraft Model 58 powered by 2ea Continental 300 HP piston engines. A non-pressurized cabin with 3-5 passenger seating configuration and cruise speed of 215 MPH. Aircraft based in Lansing.

2014 Q1 utilization	64.6 flight hours	21 trips	44 legs	51 passengers
2014 Q2 utilization	42.1 flight hours	36 trips	94 legs	149 passengers
2014 Q3 utilization	82.4 flight hours	41 trips	116 legs	136 passengers
2014 Q4 utilization	99.6 flight hours	46 trips	122 legs	121 passengers

Baron N72521:

1985 Beechcraft Model 58 powered by 2ea Continental 300 HP piston engines. A non-pressurized cabin with 3-5 passenger seating configuration and cruise speed of 215 MPH. Aircraft based at Sawyer International Airport, Marquette.

2014 Q1 utilization	83.1 flight hours	41 trips	120 legs	105 passengers
2014 Q2 utilization	76.0 flight hours	34 trips	89 legs	149 passengers
2014 Q3 utilization	77.2 flight hours	34 trips	101 legs	84 passengers
2014 Q4 utilization	98.6 flight hours	38 trips	130 legs	116 passengers

Cessna N9461Z:

1982 Cessna Model 206 powered by one Continental 300 HP piston engine. A non-pressurized cabin with 1-5 passenger seating configuration and cruise speed of 150 MPH. Aircraft based in Lansing. This airplane is used primarily for carriage of parts and tools in support of automated weather observation systems (AWOS) and airport safety inspections within the state. 4 of the 6 seats are usually removed from the aircraft to accommodate cargo. This aircraft was out of service for 6 months awaiting parts.

2014 Q1 utilization	0.0 flight hours	0 trips	0 legs	0 passengers
2014 Q2 utilization	1.5 flight hours	1 trip	2 legs	0 passengers
2014 Q3 utilization	22.1 flight hours	10 trips	29 legs	0 passengers
2014 Q4 utilization	23.3 flight hours	11 trips	29 legs	0 passengers

Rail

The white paper below summarizes information regarding rail car lease costs and rail car use.

ANN ARBOR-DETROIT REGIONAL RAIL & NORTH-SOUTH COMMUTER RAIL (WALLY) PROJECTS

The Michigan Department of Transportation (MDOT), in cooperation with the Southeast Michigan Council of Governments and the Ann Arbor Area Transportation Authority, has refurbished and leased commuter rail cars for the proposed Ann Arbor-Detroit Regional Rail and the North-South Commuter Rail (WALLY) services. MDOT entered into a contract with Great Lakes Central Railroad (GLCRR) on April 6, 2010 to refurbish and lease up to 24 commuter rail cars. This resulted in refurbishing seven cab cars and 16 coaches that MDOT planned to use on the Ann Arbor-Detroit Regional Rail and North-

South Commuter Rail services in the 2014/2015 time frame. At the same time, MDOT was working in parallel to progress rail infrastructure improvements and station work that would be necessary to implement both commuter rail projects.

The commuter car refurbishment process included complete rebuilding of all wheel and wheel-frame assemblies, installation of all new seats, installation of new floor covering throughout, installation of all new exterior window panes, refurbishment of the heating, ventilation and air conditioning systems, painting the entire interior of each car, and making each car compliant with the Americans with Disabilities Act (ADA). All 23 cars were inspected a number of times during the refurbishment process including mechanical inspections by an Amtrak-certified inspector, inspections by Federal Railroad Administration (FRA) personnel to assure compliance with federal regulations, and an inspection by authorized Amtrak personnel to assure ADA compliance. All 23 cars were tested on GLCRR trackage at slower speeds, and six cars were tested at higher speeds between Pontiac and Jackson (the route where some of the cars would operate). In addition, disability advocate groups from the Ann Arbor area tested the ADA features of the refurbished car. The first car was completely refurbished in November 2011; the 23rd car was completely refurbished in March 2013. The inspections and tests on all 23 cars were completed by mid-2013.

The contract between GLCRR and MDOT required MDOT to make monthly lease payments of \$4,228 and \$3,730 for each cab and coach car respectively, 10 months after the cars were refurbished, inspected, and fully tested. This is the point in time when each car was considered to be “In Service.” These “In Service” dates ranged from October 2013 to June 2014.

As of December 31, 2014 the contract, as amended, allotted a total of \$7.6 million for refurbishment (includes installation of restrooms in two coaches), an estimated \$17,000 for operating and maintenance, and \$2.7 million for lease costs. The operating and maintenance cost includes the cost of transporting the refurbished cars to display sites. The Federal Highway Administration (FHWA) funded \$2.8 million (27%) and the remaining funds came from the State's Comprehensive Transportation Fund in the amount of \$7.5 million (73%). The total amount expended by the end of 2014 to lease and refurbish the 23 commuter rail cars was \$10.3 million, or \$447,800 per car.

The refurbishment of the 23 commuter rail cars by GLCRR created 21 new jobs. Two-thirds of the funds spent on refurbishment occurred in Michigan, and three-fourths of the firms that did the work are based in Michigan, creating additional work for Michigan workers. Several of these firms are based in

the greater Owosso area. The refurbishment work resulted in GLCRR creating a new division devoted to refurbishing existing and constructing new passenger rail cars. In the last few years, GLCRR has refurbished several private passenger rail cars and constructed two new passenger rail cars for The Henry Ford Museum in Dearborn, Michigan.

Initially, MDOT was working with the Federal Highway Administration (FHWA) as the lead federal oversight agency to implement these services under a Categorical Exclusion environmental approval. As the projects were progressing, the federal agencies determined that the Federal Transit Administration (FTA) was the proper agency to oversee implementation of these commuter rail projects. For the Ann Arbor-Detroit Regional Rail Project, FTA determined that MDOT needed to conduct a capacity analysis and more detailed environmental work, and that no further rail infrastructure improvements or station work beyond refurbishing the commuter rail cars could progress until these two items were completed. At the same time, MDOT was working with FRA to complete FRA-funded high speed intercity passenger rail projects in this same area. FRA determined that an additional capacity analysis must be done to insure that FRA's investment in the infrastructure for intercity passenger rail service is protected and not provided for future commuter rail service. These unforeseen changes have caused significant delays to the implementation of the Ann Arbor-Detroit Regional Rail Project. For the North-South Commuter Rail Project, FTA determined that a more detailed feasibility study needed to be done as the next step toward qualifying the proposed commuter rail service for federal funding, and this study is now underway.

As it became clear that the change in federal oversight agencies and other factors would result in a significant delay to the start of commuter rail service, MDOT began working with GLCRR to seek out interim uses for the cars to offset some of the lease costs until the proposed commuter services became operational. MDOT has had success with excursions, with cars being sub-leased for two events during 2014. These sub-leases offset some of MDOT's lease costs. MDOT has installed restrooms in two of the coaches for the primary purpose of making the cars usable for longer routes, such as intercity passenger rail service, thereby expanding the possibilities for interim use.

MDOT remains optimistic that a viable, cost effective, interim use of the cars will be arranged. A number of actions are underway to increase revenues and reduce costs regarding the refurbished cars. These include the following:

- Work with Amtrak to use as many of the refurbished cars as possible, especially the two coaches with restrooms, in revenue service on Michigan's intercity passenger routes.

- Request GLCRR to aggressively promote through advertising and other means interim uses of the refurbished cars in revenue service.
- Renegotiate the terms of the current MDOT/GLCRR car refurbishment and leasing contract, including the option of contract termination.

MDOT M-97 Project

Typically, it is MDOT's goal and practice not to install pavement when winter temperatures set in, unless there are overriding circumstances. Sometimes, however, circumstances beyond the control of MDOT or the contractor require that such work be done.

What is the method to ensure that warranties for these projects are covered?

If the pavement was allowed to be placed due to the contractor not meeting their progress schedule and MDOT allowed them to place the mix beyond seasonal limitations, MDOT would not accept the pavement until the following spring to ensure that the pavement will perform as was originally intended. Furthermore, for this type of instance the contractor would be fully responsible for all warranty requirements.

If the late season paving was the result of circumstances outside the control of the contractor and MDOT needed the project finished for mobility purposes or other reasons and allowed the contractor to pave outside of seasonal limitations it would be difficult to hold the contractor liable for the warranty requirements.

On this particular project, the late season paving was agreed to by all parties and completed to help ensure the safety of motorists. MDOT agreed to extend the contract time without any damages. The contractor has assured MDOT in writing that they will honor the materials and workmanship warranties in accordance with the contract.

An MDOT memo to Representative Lane, dated April 1, 2014, providing further details is included as a separate attachment.

What is the projected life expectancy for this project when work is done during these extreme temperatures?

MDOT has limited experience in estimating the long term effects caused by operation and production outside specification requirements, including paving outside of seasonal limitations in marginal weather conditions. Pavement performance is based on the premise that specifications, including seasonal limitations, are followed and therefore each pavement in our data set has equal weight in analyzing overall pavement performance. MDOT does not have separate performance data which would allow us determine the relationship between pavement performance and the adverse effects of paving outside of our seasonal limitations. MDOT recognizes that cold weather installation is not conducive to good pavement performance, which is why the agency typically imposes weather restrictions. Each situation like this would be unique and have its own set of circumstances that may impact pavement performance.

How long will MDOT be responsible for monitoring the payment through the warranty period?

For this type of project the warranty period would normally be five years; thus MDOT would monitor the pavement condition for five years for warranty purposes. Generally speaking, MDOT is responsible for monitoring the pavement for the length of the warranty period.



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN

**MACOMB-ST. CLAIR TRANSPORTATION
SERVICE CENTER**

KIRK T. STEUDLE
DIRECTOR

April 1, 2014

The Honorable Marilyn Lane
State Representative 31st District
P.O. Box 30014
Lansing, MI 48909-7514

Re: Control Section 50031- Job Number 45735A
Groesbeck Hwy. (M-97), Hayes Road to 14 Mile Road

Dear Representative Lane:

As you requested in our meeting of March 28, 2014, by this letter I am providing to you and the local officials details about the project that was constructed last year.

Project Description:

3.55 miles of hot mix asphalt cold milling and resurfacing, pavement removal and repair, concrete curb, gutter, sidewalk and ramps, drainage, watermain, traffic signal, signing, and pavement markings on M-97 from Hayes Road north to 14 Mile Road in the cities of Warren, Roseville, and Fraser, Macomb County.

The intended design "fix-life" for the project is 10- 15 years. This project includes two concurrent 5 year materials and workmanship pavement warranties.

Letting Date:	08/03/2012
Work Began:	12/17/2012
Contract Open to Traffic Date:	10/01/2013
Actual Open to Traffic Date:	12/12/2013
Contract Completion Date:	06/01/2014

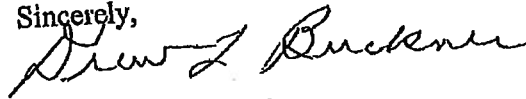
Item quantity increases, extra work, utility coordination and other reasons caused the opening of the road to be delayed beyond the normal seasonal limitations, requiring the placement of hot asphalt mix in December. It was decided by consensus, that placing the wearing course was essential to ensure the safety of the motorists during the winter. As a result, the contractor was entitled to an extension of contract time without the assessment of any liquidated damages.

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April 1, 2014
Rep. Lane

Work remaining to be completed in 2014 consists of: placing permanent pavement markings, permanent turf establishment and assorted punch-list items. Currently the project is on schedule to be completed by the Contract Completion Date. The Contractor has assured MDOT in writing they will honor the materials and workmanship warranties in accordance with the contract.

Please contact me if I can be of further assistance. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Drew L. Buckner".

Drew L. Buckner, Manager
Macomb-St. Clair TSC

Enclosure

Jenean Robbins

From: Tim Hay <thay@ajaxpaving.com>
Sent: Saturday, November 23, 2013 7:12 AM
To: Jenean Robbins
Cc: Johnny Watkins
Subject: Re: M-97 Warranty

Jenean

Ajax paving agrees that the warranty requirements are still in effect.

Sent from my iPhone

> On Nov 22, 2013, at 5:22 PM, "Jenean Robbins" <jeneanr@tymeengineering.com> wrote:

>

> Hi Tim,

>

> Please review and respond to the attached letter to indicate Ajax's agreement.

>

> Thanks,

>

>

> Jenean Robbins, P.E.

> Project Engineer

> (248) 388-0558

>

> TYME ENGINEERING, INC.

> 32121 Schoolcraft Road, Livonia, MI 48150 www.tymeengineering.com

> <201311221718.pdf>

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**WARRANTY WORK REQUIREMENTS FOR
MULTIPLE COURSE HOT MIX ASPHALT OVERLAYS ON CONCRETE PAVEMENT;
MULTIPLE COURSE HOT MIX ASPHALT OVERLAYS ON COMPOSITE PAVEMENT;
MULTIPLE COURSE HOT MIX ASPHALT OVERLAYS ON FLEXIBLE PAVEMENT**

C&T:CJB

1 of 2

C&T:APPR:KPK:DBP:04-29-11

FHWA:APPR:06-01-11

a. Description. This special provision must be used in conjunction with 12SP500(A) to construct to warranted pavement for multiple course Hot Mix Asphalt (HMA) overlays on rigid, flexible and composite pavements using E10, E30 and E50 Superpave mixtures.

b. Limits of Warranted Work. The warranted work includes all multiple course HMA overlays on driving lanes within the project limits unless otherwise indicated on the plans.

c. Warranty Term. The warranty term will be 5 years from the date of Initial Acceptance otherwise termed the Acceptance Date of Construction.

d. Warranty Bond. Supply a warranty bond equal to \$400,000.00 or five percent of the total contract amount whichever is less.

e. Initial Ride Quality Acceptance Criteria. This section applies to projects that do not contain a separate ride quality special provision. These ride quality requirements must be met for the initial acceptance of warranted HMA pavement.

Perform all ride quality measurements on the original and final pavement surfaces. The cost of performing these ride quality measurements will be included in the cost of other contract items and will not be paid for separately.

The average final ride quality of each driving lane per lane-mile must be equal to the following:

<u>Original Ride Quality</u>	<u>Required Final Ride Quality</u>
≤70 RQI	<53 RQI
>70 RQI	≤80% of original

In addition, the resultant RQI value of any 528 foot segment in any single driving lane must not have increased from the existing value prior to the work being performed.

f. Warranty Requirements. Table 1 lists the allowable threshold limit for each condition parameter within each segment and the maximum number of allowable segments within a driving lane for each condition parameter. If any of the warranty requirements are not met, as a result of a defect in materials and/or workmanship, corrective action (warranty work) is required.

The defective segments for surface distress may or may not be contiguous to necessitate corrective action. The maximum allowable number of defective segments for each condition parameter applies to each driving lane in each travel direction. Each driving lane must be evaluated

C&T:CJB

2 of 2

independent of adjacent driving lanes. Any pavement surface requiring removal/replacement to correct deficiencies, for any condition parameter, must be replaced full-width across the driving lane.

g. Corrective Actions. Table 2 lists recommended corrective actions to outline typical acceptable treatments for the various condition parameters. The Department will accept the listed corrective action if the action addresses the cause of the condition parameter. The Contractor may use an alternative action subject to Department approval.

Table 1: Warranty Requirements

Condition Parameter	Threshold Limits Per Segment (Length = 528 feet)	Max. Defective Segments Per Driving Lane-Mile (a)
Longitudinal Cracking/Open Joint (d)	10% of segment length	1
De-bonding	5% of segment length	1
Raveling	8% of segment length	1
Flushing	4% of segment length	1
Rutting (c)	ave. rut depth = 3/8 inch (b)	1
<p>a. The maximum allowable number of defective segments per driving lane is determined by multiplying by the length of the specific driving lane in miles.</p> <p>b. The rut depth threshold applies to each wheel path independently.</p> <p>c. The pavement surface will be evaluated for the presence of rutting on each driving lane throughout the warranty period. The pavement surface will be measured beginning at the POB and every 132 feet thereafter to determine average rut depth to quantify rutting for a particular segment.</p> <p>Rut measurements will be done using a straight rigid device that is a minimum of 7 feet long and of sufficient stiffness that it will not deflect from its own weight, or a wire under sufficient tension to prevent sag when extended 7 feet. Measurements will be taken by placing this "straightedge" across the pavement surface perpendicular to the direction of travel. The straightedge must contact the surface on at least two bearing points with one located on either side of the rut. The straightedge is properly located when sliding the straightedge along its axis does not change the location of the contact points. Rut depth is then measured at the point of greatest perpendicular distance from the bottom of the straightedge to the pavement surface.</p> <p>d. A crack in the new surface will be excluded if it is determined to be "reflective" from a similar underlying crack condition.</p>		

Table 2: Recommended Corrective Actions

Condition Parameter	Recommended Action
Longitudinal Cracking/ Open Joint	Cut and Seal
De-bonding	Mill and Resurface
Raveling	Mill and Resurface
Flushing	Mill and Resurface
Rutting	Microsurface or Mill and Resurface (a)
a. Recommended action is dependent on the depth of the rut susceptible material.	

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MATERIALS AND WORKMANSHIP PAVEMENT WARRANTY

C&T:CJB

1 of 7

C&T:APPR:KPK:DBP:01-12-12
FHWA:APPR:01-12-12

a. Description. The materials and workmanship pavement warranty consists of the warranty bond, the terms of this special provision, and the Special Provision for Warranty Work included in the contract. This special provision establishes the common terms and definitions applied to pavement projects requiring a warranty. The Materials and Workmanship Pavement Warranty warrants the Department against defects in materials and workmanship.

b. Definitions.

Materials and Workmanship Warranty. The Contractor is responsible for correcting defects in the pavement caused by elements within the Contractor's control (i.e., the materials supplied and the workmanship), during the warranty period. Since the Department is responsible for the pavement design, the Contractor assumes no responsibility for defects that are design related. If a defect is attributable to both, the materials and/or workmanship, and the design, responsibility for correcting the defect will be shared by the Department and the Contractor; the Contractor is responsible for the percentage of fault attributable to the workmanship and/or materials, and the Department is responsible for the percentage of fault attributable to the design.

Acceptance Date of Construction. The date when the warranted work is complete and confirmed in writing on the initial acceptance document, by the Department, to be in compliance with the contract specifications and is open to traffic. This is the date of initial acceptance and constitutes the start date for the warranty period. There may be more than one acceptance date of construction for a project.

Warranty Bond. A bond issued by a surety which guarantees that the warranty requirements will be met.

Conflict Resolution Team (CRT). The five-person team responsible for resolving disputes between the Department and the Contractor regarding any claim of non-compliance with the warranty requirements.

Driving Lane(s). The delineated pavement surface used by traffic and the portion of the pavement considered warranted work. Each of the following is considered a separate driving lane.

- Each individual mainline lane.
- The sum of all ramp lanes and the associated acceleration/deceleration lanes is considered a separate driving lane.
- The sum of all auxiliary lanes, such as passing lanes and turn lanes, is considered a separate driving lane.

Contractor's warranty bond surety agent by the Department. Neither the initial acceptance nor any prior inspection, acceptance or approval by the Department diminishes the Contractor's responsibility under this warranty.

The Department may accept the work and begin the warranty period, excluding any area needing corrective work, to accommodate seasonal limitations or staged construction.

Acceptance of material, in penalty, under the Department's quality assurance program will not relieve the Contractor from meeting the material and workmanship warranty requirements for the accepted material.

d. Warranty Bond. The Contractor must furnish a single term warranty bond, in an amount stipulated in the Special Provision for Warranted Work Requirements, prior to contract award. The effective starting date of the warranty bond will be the Acceptance Date of Construction. The warranty bond will be released at the end of the warranty period or after all warranty work has been satisfactorily completed, whichever is latest.

e. Rights and Responsibilities of the Department. The Department:

1. Reserves the right to approve the schedule proposed by the Contractor to perform warranty work.
2. Reserves the right to approve all materials and specifications used in warranty work.
3. Reserves the right to determine if warranty work performed by the Contractor meets the contract specifications.
4. Reserves the right to perform, or have performed, routine maintenance during the warranty period, which routine maintenance will not diminish the Contractor's responsibility under the warranty.
5. Reserves the right, if the Contractor is unable, to make immediate emergency repairs to the pavement to prevent an unsafe road condition as determined by the Department. The Department will attempt to notify the Contractor that action is required to address an unsafe condition. However, should the Contractor be unable to comply with this requirement, to the Department's satisfaction and within the time frame required by the Department, the Department will perform, or have performed any emergency repairs deemed necessary. Any such emergency repairs undertaken will not relieve the Contractor from meeting the warranty requirements of this special provision. Any costs associated with the emergency repairs will be paid by the Contractor if it is determined the cause was from defective materials and/or workmanship.
6. Is responsible for monitoring the pavement throughout the warranty period and will provide the Contractor all written reports of the surface treatment's condition related to the warranty requirements. The Contractor will not be relieved of any responsibility based upon a claim that the Department failed to adequately monitor the pavement or to report its findings to the Contractor.
7. Is responsible for notifying the Contractor, in writing, of any corrective action required to meet the warranty requirements.

operations of the Contractor as set forth more fully in subsections 104.07.C, 107.10 and 107.11 of the Standard Specification for Construction.

g. Evaluation Method. The Department will conduct pavement evaluations by dividing the project into segments. Each individual driving lane will be divided into segments of 528 feet (1/10 mile) in length for measuring and quantifying the condition parameters. Evaluation will include use of both the Department's Pavement Management System and/or field pavement condition reviews. This evaluation may be waived in emergency situations.

The beginning point for laying out segments will be the Point of Beginning (POB) of the project. Segments will be laid out consecutively to the Point of Ending (POE) of the project. The original segmentation of the project will be used for all successive reviews throughout the warranty period.

h. Condition Parameters. Condition parameters are used to measure the performance of the warranted pavement during the warranty term. Each condition parameter has a threshold level applied to each segment and a maximum number of defective segments allowed before corrective action (warranty work) is required.

i. Warranty Requirements. Warranty work will be required when the following two criteria are met as a result of a defect in materials and/or workmanship.

Criterion 1 - The threshold limit for a condition parameter is exceeded, and

Criterion 2 - The maximum allowable number of defective segments is exceeded for one or more condition parameters for a driving lane.

Specific threshold limits and segment limits are covered in the Special Provision for Warranted Work.

To determine whether the failure to meet the warranty criteria is a result of defects in materials and/or workmanship, a joint field investigation by the Department and the Contractor will be conducted. The Department and Contractor may elect to have a forensic investigation conducted. The decision to undertake a forensic investigation, the scope of it, and the selection of the party to conduct it will be agreed to by the Department and the Contractor. The forensic investigation will be conducted following the "Material and Workmanship Forensic Investigation Procedure". If agreement cannot be reached a Conflict Resolution Team (CRT) may be convened in accordance with this special provision. The CRT will then decide the need for a forensic investigation, its scope and the party to conduct the investigation. All costs related to the forensic investigation will be shared proportionately between the Contractor and the Department based on the determined cause of the condition.

During the warranty period, the Contractor will not be held responsible for pavement distresses that are caused by factors unrelated to materials and workmanship. These include, but are not limited to: chemical and fuel spills, vehicle fires, snow plowing, and quality assurance testing such as coring. Other factors considered to be beyond the control of the Contractor which may contribute to pavement distress will be considered by the Engineer on a case by case basis upon receipt of a written request from the Contractor.

j. Conflict Resolution Team. The sole responsibility of the Conflict Resolution Team (CRT) is to provide a decision on disputes between the Department and the Contractor

**MICHIGAN DEPARTMENT OF TRANSPORTATION
INITIAL ACCEPTANCE FOR PAVEMENT WARRANTY**

CONTRACT ID: _____
CONTRACT SECTION: _____ JOB NUMBER: _____
SURETY NAME: _____
SURETY ADDRESS: _____
CONTRACTOR NAME: _____
CONTRACTOR ADDRESS: _____

IDENTIFY EACH JOB NUMBER, LOCATION AND WORK SEPARATELY					
JOB NUMBER	ROUTE NUMBER	CONTROL SECTION	WORK TYPE	DATE ACCEPTED	PROJECT ENGINEER

INITIAL ACCEPTANCE OF WARRANTY WORK APPROVAL					
CONTRACTOR'S SIGNATURE: _____					
ENGINEER'S SIGNATURE: _____					
ACCEPTANCE DATE: _____					

